



# Delaware River Basin Commission

## **LOWER DELAWARE RIVER PROGRAM**

**PUBLIC HEARING**

**October 27, 2004**

# Public Hearing Agenda

## **1. HEARING OPENING**

## **2. BACKGROUND**

- Special Protection Waters (SPW) Program
- Lower Delaware River

## **3. DRBC LOWER DELAWARE PROGRAM**

- Water Quality Monitoring Program
- SPW Eligibility Determination

## **4. PROPOSED RULE CHANGE**

- Classification of Lower Delaware as SPW
- Applicability
- Schedule

## **5. PUBLIC COMMENTS**

# Send Comments To

## Delaware River Basin Commission

Written comments should be addressed to the Commission Secretary as follows:

- by **e-mail** to [paula.schmitt@drbc.state.nj.us](mailto:paula.schmitt@drbc.state.nj.us);
- by **fax** to Commission Secretary -- dial 609-883-9522;
- by **U.S. Mail** to Commission Secretary, DRBC, P.O. Box 7360, West Trenton, NJ 08628-0360; or
- by **overnight mail** to Commission Secretary, DRBC, 25 State Police Drive, West Trenton, NJ 08628-0360.

# General Areas of Commission Authority

- Water Supply/Flow Management
- Withdrawals and Diversions
- Recreation
- Hydroelectric Power
- **Pollution Control**
- Flood Protection
- Watershed Management

# Delaware River Watershed Facts

- ❑ Nearly **15 million** people (about 5% of the U.S. population) rely on the waters of the basin
- ❑ Drains **13,539 mi<sup>2</sup>** (34,659 km<sup>2</sup>), or 0.4 of 1% of the continental U.S. land area
- ❑ Flows **330** miles from Hancock, NY to Delaware Bay





# Non- Tidal Delaware River



- Flows **197 miles** from Hancock, NY to Trenton, NJ (Head of Tide)
- **Upper Delaware** – 73 miles
- **Delaware Water Gap** – 47 miles
- **Lower Delaware** – 77 miles





## Wild and Scenic Reaches in the Delaware Basin

# DRBC Protection for High Quality Waters



DRBC and the Water Quality Advisory Committee worked with the public to develop a DRBC classification for high quality waters



# Special Protection Waters Rule

- On December 9, 1992, the Commission amended the Regulations to establish the Special Protection Water policy
- On February 23, 1994 the Commission amended the Regulations to add requirements for controlling non-point sources (NPS) of pollution in Special Protection Waters

# Special Protection Waters

Goal: Protect existing high quality waters with exceptionally high scenic, recreational, ecological or water supply values through the “**no measurable change**” policy



# Stream Segments Classified by DRBC as SPW in 1992



- The Upper Delaware Scenic and Recreational River
- Delaware Water Gap National Recreation Area
- The 8.5-mile stretch of river above the Delaware Water Gap National Recreation Area and below the Upper Delaware National Scenic and Recreational River

# *Delaware Water Gap*





# Proposed Classification of Lower Delaware as SPW





# History of Lower Delaware Program

- **1997:** Lower Delaware River Management Plan by NPS
- **1999:** National Wild & Scenic River Study Report by NPS
- **1999:** DRBC staff performs preliminary water quality survey of the Lower Delaware
- **2000:** Lower Delaware designated under Wild & Scenic Act
- **2001:** Delaware Riverkeeper petitions DRBC to classify Lower Delaware as SPW
- **2000 – 2004:** DRBC performs 5-year comprehensive water quality study to determine SPW eligibility and to establish EWQ

# Lower Delaware Management Plan Goals

Designated stream reaches “...*shall be managed in accordance with the river management plan...*”  
(excerpt from the Lower Delaware Wild and Scenic Rivers Act)

Goal 1: Water Quality “Maintain existing water quality in the Delaware River and its tributaries from measurably degrading and improve it where practical.”

# Lower Delaware River Study Results



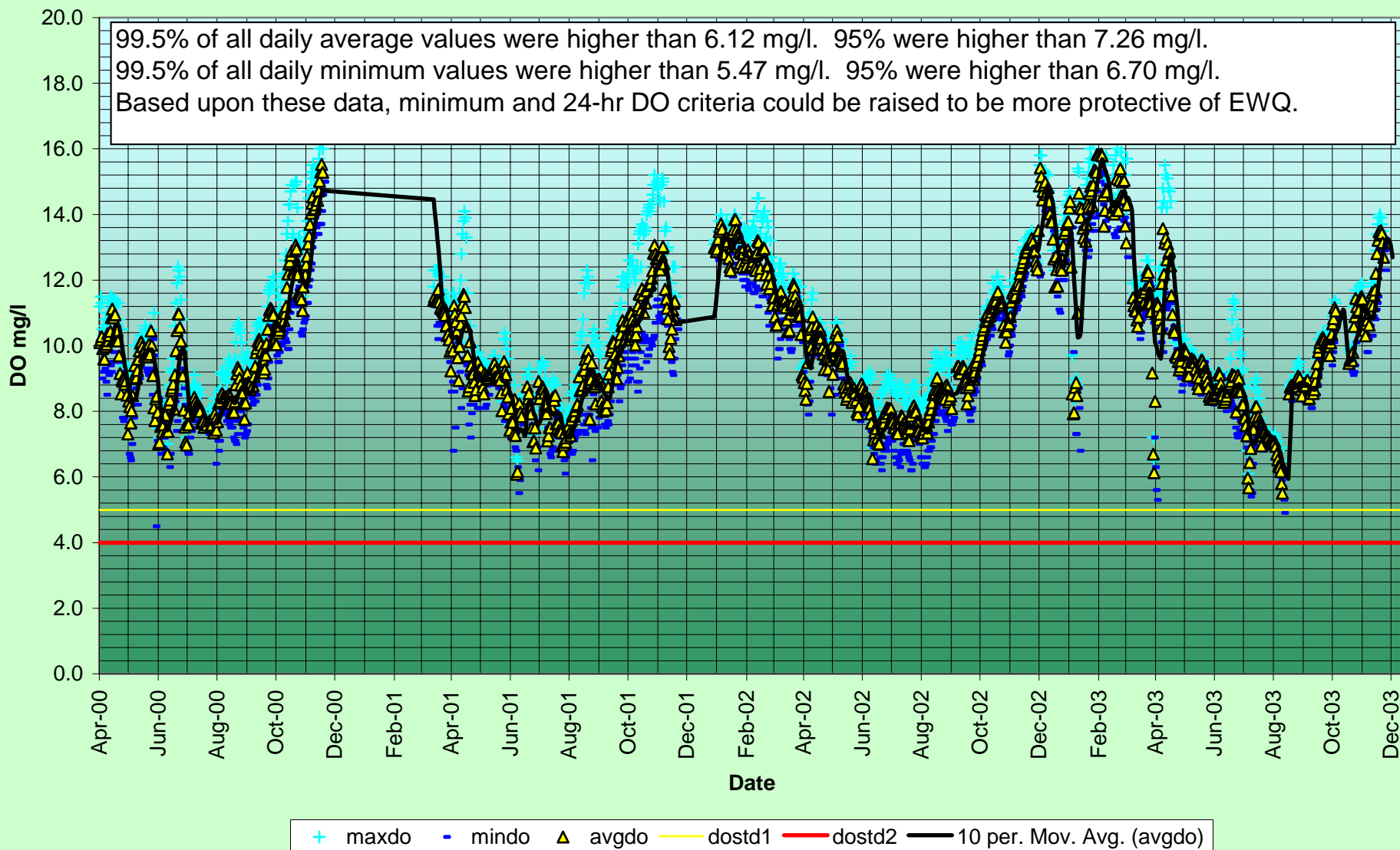
# Delaware River EWQ vs Standards

<b>EWQ Better</b>	EWQ is better than criteria									
<b>EWQ Better Except for High Flow</b>	EWQ is better than criteria except during high flow events (E. coli, Fecal coliform bacteria)									
<b>Criteria exceeded by natural conditions</b>	EWQ is evidenced to be naturally higher than criteria (TDS, pH)									
<b>TP criterion exceeded but use not limited</b>	EWQ higher than NJ 0.1 criterion, but suitable for designated uses (Total Phosphorus)									
<b>EWQ Exceeds Criteria</b>	EWQ Exceeds Criteria for >10% of Samples									
<b>Not Assessed</b>	Not Assessed									
<b>Parameter</b>	<b>Del @ Portland</b>	<b>Del @ Belvidere</b>	<b>Del @ Easton</b>	<b>Del @ Riegelsville</b>	<b>Del @ Milford</b>	<b>Del @ Bulls Island</b>	<b>Del @ Lambertville</b>	<b>Del @ Washington Xing</b>	<b>Del @ Trenton</b>	<b>Most Stringent Criterion</b>
Bio - EPT (N=1)										UPDE EWQ
Bio - HBI (N=1)										NJ 4.0
Bio - Diversity (N=1)										UPDE EWQ
Dissolved Oxygen										5 (all)
pH										6.5-8.5 (NJ)
Water Temperature F										Seasonal (PA)
Turbidity										15 (NJ)
CaCO3 Alkalinity										Min 20 (PA)
Chloride										250 (all)
Nitrate NO3-N										10 (PA,NJ)
Ammonia NH3-N										Formula (PA,NJ)
Total Phosphorus										0.1 (NJ)
Total Dissolved Solids										120/256 (DRBC)
Total Suspended Solids										40 (NJ)
E. coli geometric mean										126 (EPA)
Fecal Coliform geometric mean										200,400 (all)
Enterococcus geometric mean										33,61 (NJ)
Biocriteria	NO STANDARD									None
CaCO3 Hardness	NO STANDARD									None
Chlorophyll A mg/m3	NO STANDARD									None
Dissolved Oxygen % Saturation	NO STANDARD									None
Orthophosphate PO4-P	NO STANDARD									None
Phytoplankton Biomass mg/m3	NO STANDARD									None
Specific Conductance umhos/cm	NO STANDARD									None
Total Nitrogen : Total Phosphorus ratio	NO STANDARD									None
Total Kjeldahl Nitrogen	NO STANDARD									None
Total Nitrogen	NO STANDARD									None

EWQ definition would create targets for parameters without standards

# Water Quality vs. Standards – Pt Pleasant DO mg/l

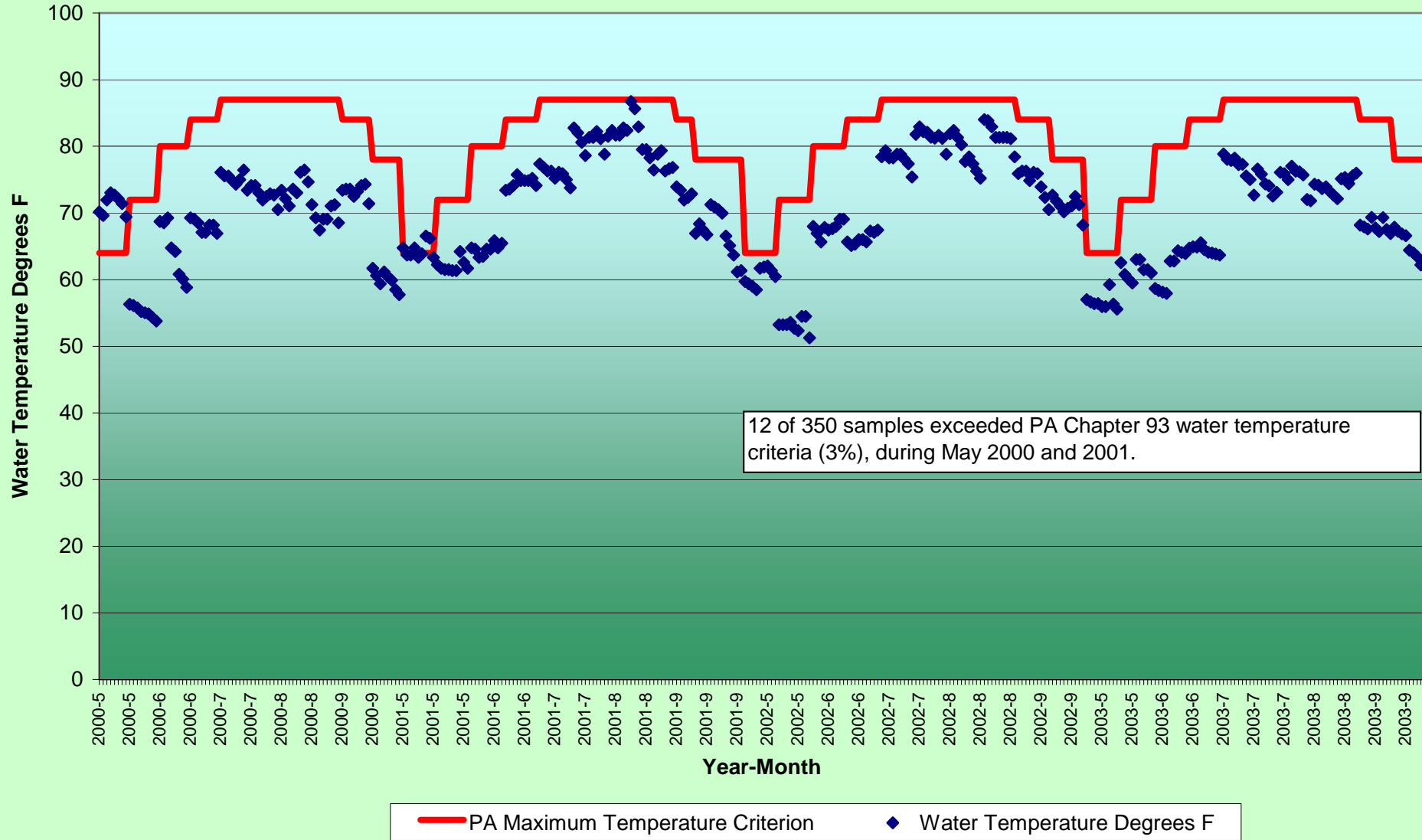
**Point Pleasant Dissolved Oxygen (mg/l)**  
**Daily Average, Maximum, and Minimum 2000-2003**





# Water Temperature: PA Warm Water Criteria A Good Fit for Lower Delaware

Monthly Delaware River Water Temperature 2000-2003  
Comparison With Pennsylvania Warm Water Fishery Criteria



# **Justification for Special Protection Waters**

**Water Quality** – Delaware River WQ is better than all tributaries in Lower Delaware, including C1, EV, HQ

**Water Supply** – Exceptional value with 2.9 Million relying on Lower Delaware

**Scenic Value** – Exceptional and unique in many locations

**Fisheries** – Exceptional and unique for migratory species; healthy warmwater fishery

# **Justification for Special Protection Waters**

(cont'd)

**Habitat** – Delaware River is unique free flowing river; exceptional habitat values; optimal assessment scores for fisheries and macroinvertebrates.

**Recreation** – Exceptional value with 15,000 canoes per season at Bucks County River Country; heavy use of access areas and by riverside communities; festivals centering on river.

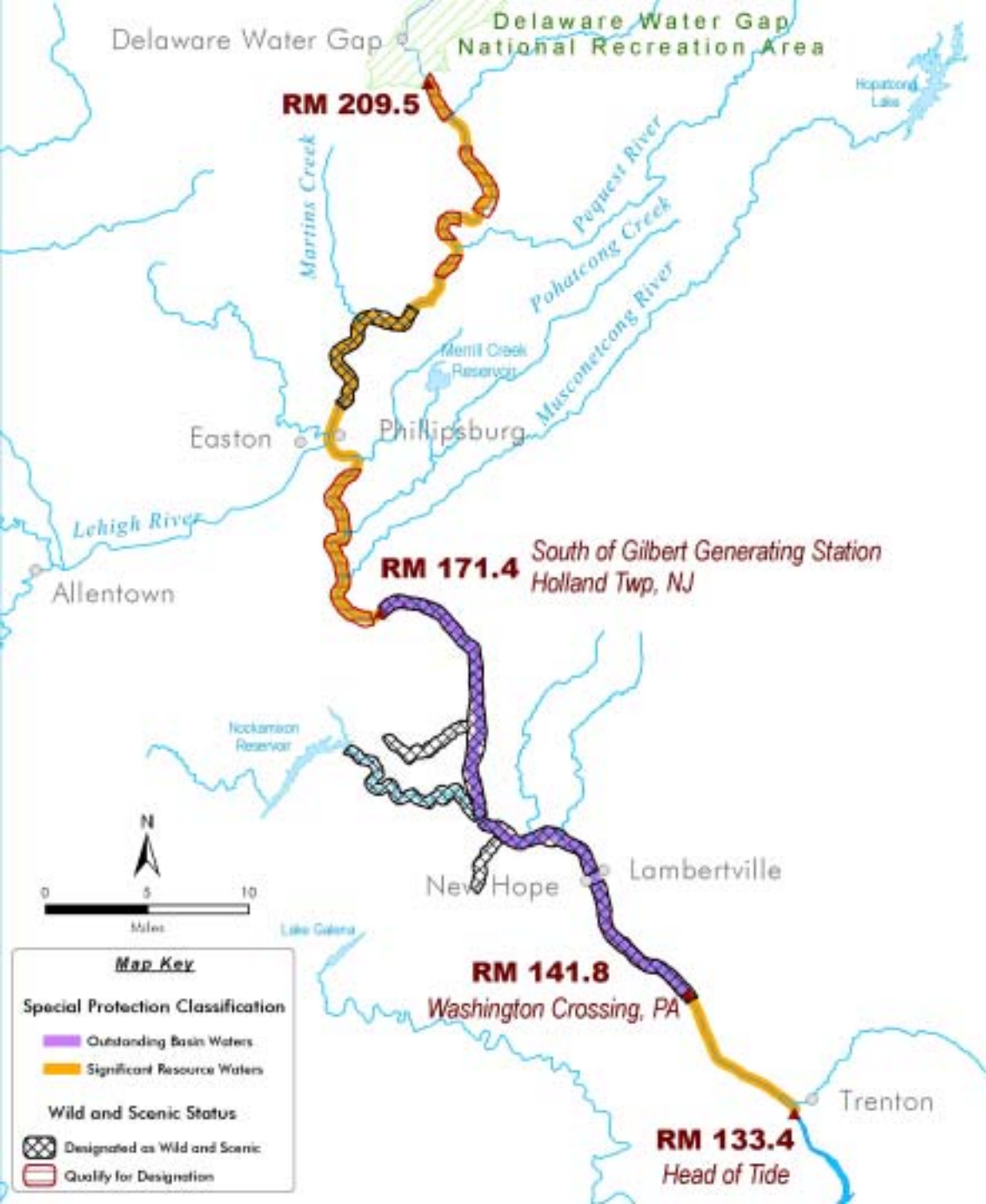
# **Classification of Special Protection Waters**

## **1. Significant Resource Waters**

- **RM 209.5** (downstream boundary of DWGNRA) to **RM 171.4** (near Holland Twp, NJ)
- **RM 141.8** (Washington Crossing, PA) to **RM 133.4** (Head of Tide at Trenton, NJ)

## **2. Outstanding Basin Waters**

- **RM 171.4** (near Holland Twp, NJ) to **RM 141.8** (Washington Crossing, PA)



# Classification of SPW in Lower Delaware



# SPW Regulations Rule Change

1. Objective of SPW Program is to achieve *No Measurable Change* to Existing Water Quality (EWQ)
2. Rule Change Steps
  - Step 1 – classify Lower Delaware sections
    - o Applicable policies include 1.) policy on allowable discharges, 2.) wastewater treatment policies, 3.) non-point source policies
  - Step 2 – establish EWQ targets
    - o Comparison to water quality targets can be made to protect EWQ

# SPW Regulations Applicable to Lower Delaware after Step 1

1. Regulations applicable to *new and expanding* discharges to SPW (Expanding “...refers to alterations or additions to existing wastewater treatment facilities that result in a reviewable project...” under DRBC *Rules of Practice and Procedure*)
  - a) Policy on Allowable Discharges
    - Direct discharges discouraged
    - Alternatives analysis required

# **SPW Regulations Applicable to Lower Delaware after Step 1 (cont'd)**

- b) Policies Related to Wastewater Treatment Facilities
  - Standby power requirements
  - Remote alarm
  - No visual plumes
  - Emergency Management Plans
  - Natural WW treatment feasibility analysis
  - Minimum level of WW treatment
  - Best Demonstrated Technology for disinfection

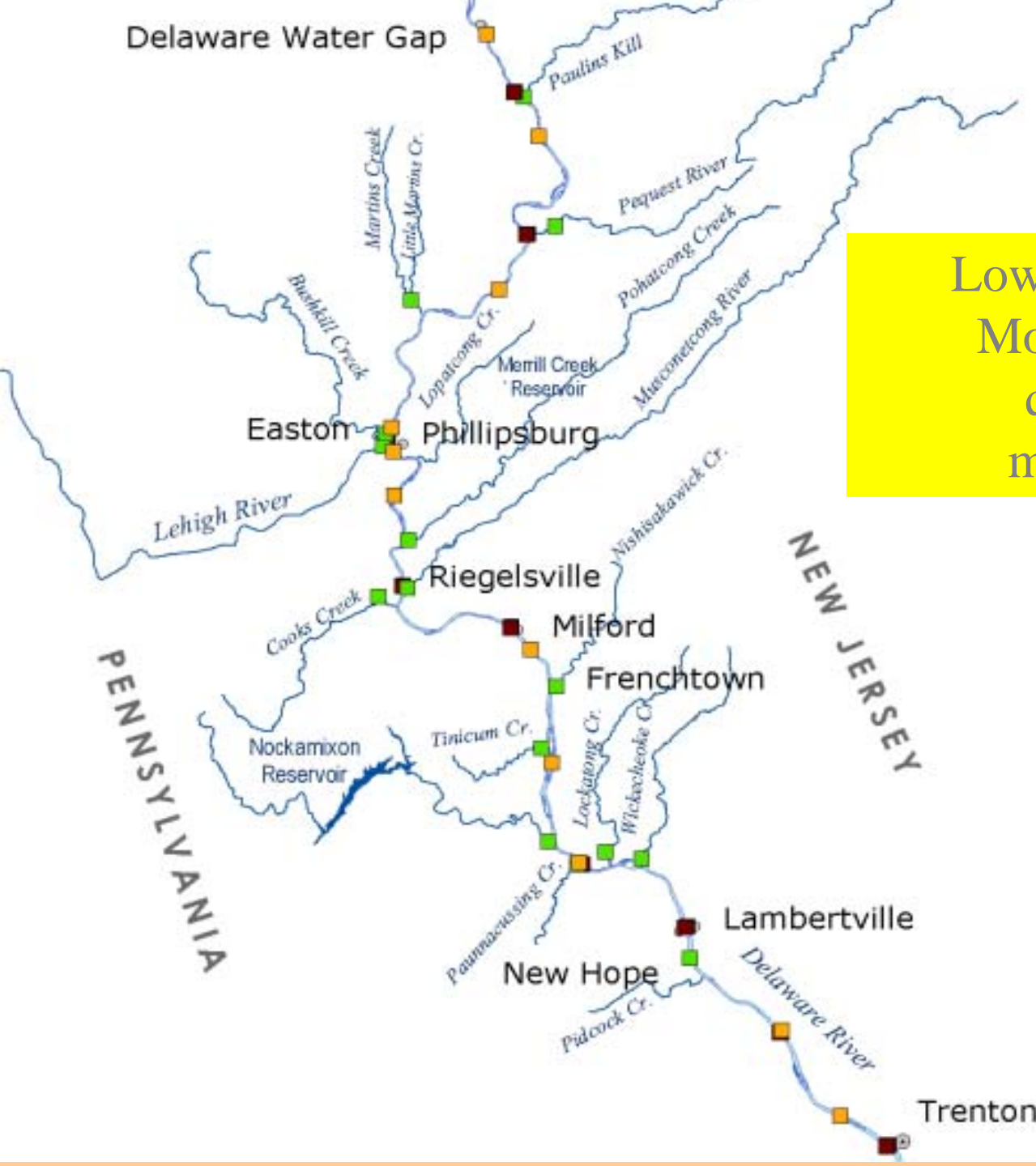
# **SPW Regulations Applicable to Lower Delaware after Step 1 (cont'd)**

- c) Policies Concerning Control of Non-Point Sources
  - Project approval conditioned on existence of Non-Point Source Pollution Control Plan for project area
  - Project approval subject to condition that new connections to project system be limited to service areas regulated by NPSPC Plans approved by Commission

# SPW Regulations Applicable to Lower Delaware after Step 1

2. Regulations applicable to *existing* discharges to SPW
  - a) Policies Related to Wastewater Treatment Facilities (upon permit renewal)
    - Standby power requirements
    - Remote alarm
    - No visual plumes
    - Emergency Management Plans
  - b) *Existing* discharges not subject to other policies unless they “expand”

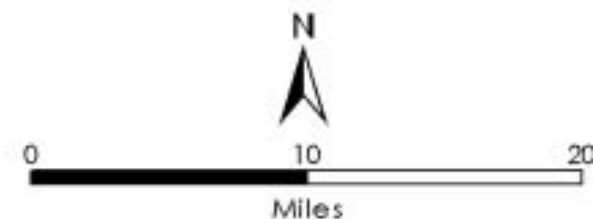




Lower Delaware River  
Monitoring Sites for  
quantifying and  
monitoring EWQ

### Sampling Locations

- Macroinvertebrate Site
- Main Stem Site
- Tributary Site



# **SPW Regulations Applicable to Lower Delaware after Step 2 (2005)**

1. *No Measurable Change Policy*
  - Water quality calculation to determine if new or expanding discharge would change water quality
  - Consideration of cumulative effects on water quality
2. Effluent limits per DRBC docket and NPDES permit

# Schedule

- **Oct 14, 2004:** Informational meeting on SPW classification at Prallsville Mill in Stockton, NJ
- **Oct 20, 2004:** Informational meeting on SPW classification at Lafayette College in Easton, PA
- **Oct 27, 2004:** Public Hearing on SPW classification at National Constitution Center in Philadelphia, PA
- **Nov 30, 2004:** Public Comment Period ends

# Public Hearing Notices

- Notices published from September 23 through October 20, 2004
- Federal Register (Sept. 23), New Jersey Register (Oct. 4), Pennsylvania Code and Bulletin (Oct. 9), New York Register (Oct. 20), Delaware Register of Regulations (Oct. 1)

*Lower  
Delaware*







*Photo by Kim Weimer,  
Buck County Courier Times*



*Delaware River at  
Washington Crossing*





*Thank You for Attending*

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